

Abstract of the Disclosure:

An alkali-free glass consists essentially of, in mass percent, 58-70%  $\text{SiO}_2$ , 10-19%  $\text{Al}_2\text{O}_3$ , 6.5-15%  $\text{B}_2\text{O}_3$ , 0-2%  $\text{MgO}$ , 3-12%  $\text{CaO}$ , 0.1-5%  $\text{BaO}$ , 0-4%  $\text{SrO}$ , 0.1-6%  $\text{BaO}+\text{SrO}$ , 0-5%  $\text{ZnO}$ , 5-15%  $\text{MgO}+\text{CaO}+\text{BaO}+\text{SrO}+\text{ZnO}$ , 0-5%  $\text{ZrO}_2$ , 0-5%  $\text{TiO}_2$ , and 0-5%  $\text{P}_2\text{O}_5$ . The alkali-free glass contains substantially no alkali metal oxide and has a density of  $2.45\text{g/cm}^3$  or less, an average coefficient of thermal expansion of  $25 \times 10^{-7}/^\circ\text{C}$  -  $36 \times 10^{-7}/^\circ\text{C}$  within a temperature range between 30 and  $380^\circ\text{C}$ , and a strain point not lower than  $640^\circ\text{C}$ .